

Future of circular economy in Thailand: Evidence from corporate efforts

Md Abdus Salam*

St Teresa International University, Thailand.

Email: abdus@stic.ac.th

*Corresponding Author

Received: 06/01/2025

Revised : 27/01/2025

Accepted: 28/01/2025

Abstract

This position paper advocates for the transition to a circular economy as a critical pathway for sustainable development, focusing on Thailand's potential to emerge as a leader in Southeast Asia. The paper highlights the proactive role of leading Thai corporations, such as Siam Cement Group (SCG), in implementing circular economy principles to address environmental challenges and foster economic growth. Through an analysis of corporate strategies, this study underscores the adoption of sustainable manufacturing processes, resource optimization, and closed-loop systems. Key examples illustrate how innovative practices contribute to reducing waste and promoting product life cycle management. While Thailand has made significant progress, the paper identifies persistent challenges, including regulatory inconsistencies, limited consumer awareness, and infrastructural gaps. It argues that overcoming these barriers will require stronger collaboration between public and private stakeholders, alongside greater investments in research and development. This position paper advocates for Thailand to leverage its unique strengths to establish itself as a regional benchmark for sustainability. By aligning corporate efforts with supportive policies, Thailand can achieve not only environmental sustainability but also long-term economic resilience in a resource-constrained world.

Keywords: Circular Economy, Thailand, Sustainability, Corporate Effort

Introduction

The transition to a circular economy has emerged as a critical strategy for addressing global environmental challenges and ensuring sustainable economic growth. By focusing on minimizing waste, reusing resources, and creating value from by-products, the circular economy model represents a significant departure from the traditional linear economy. For Thailand, this transformation is not merely an option but a necessity, given the country's economic reliance on resource-intensive industries and its vulnerability to environmental degradation.

Thailand has demonstrated promising potential to lead Southeast Asia in adopting circular economy principles. With major corporations such as Siam Cement Group (SCG) already embedding circular practices into their operations, the country is paving the way for regional leadership. These corporate efforts, combined with supportive government policies and growing public awareness, position Thailand as a frontrunner in this transformative journey.

This paper argues that Thailand can capitalize on its strategic advantages and existing momentum to establish itself as a leader in the circular economy within Southeast Asia. By examining evidence from corporate initiatives and analyzing the broader implications for the country's economy and environment, this paper aims to highlight the opportunities and challenges that lie ahead.

Background

The concept of a circular economy (CE) is gaining significant traction worldwide as a sustainable alternative to the traditional linear economic model, which typically follows a "take, make, dispose" pattern. CE, on the other hand, promotes the idea of reducing waste and reusing resources through design and innovation, fostering long-term sustainability (Geissdoerfer et al., 2017). This model aims to create a closed-loop system where products, materials, and resources are continually repurposed to avoid depletion of finite resources and minimize environmental impact.

Thailand, as one of the leading economies in Southeast Asia, is increasingly acknowledging the value of CE to address mounting environmental concerns and resource inefficiencies. With its rapidly growing industrial base and increasing waste generation, the country faces significant challenges in implementing sustainable practices across its sectors (Rattanawiwat et al., 2020). In response, both government policies and corporate initiatives are aligning with CE principles, with an emphasis on innovation in business models that focus on resource optimization, recycling, and sustainable production processes (Suntikul et al., 2022). The adoption of a circular economy in Thailand aligns with its Bio-Circular-Green (BCG) Economy Model, a national strategy aimed at integrating sustainability into economic practices. By leveraging its strengths in agriculture, manufacturing, and tourism, Thailand can adopt circular principles across key industries.

As a key player in the regional economy, Thailand has the potential to position itself as a leader in the circular economy movement within Southeast Asia. Leading corporations in the country have already begun to implement circular economy practices in their operations.

Corporate Efforts in the Circular Economy

In recent years, several major corporations in Thailand have recognized the importance of transitioning to a circular economy model, integrating sustainability into their core operations. These corporate efforts are pivotal in advancing Thailand's position as a leader in circular economy practices in Southeast Asia. Among these corporations, Siam Cement Group (SCG) stands out as a prominent example of successful implementation of circular economy principles.

SCG has adopted a comprehensive approach to circularity, focusing on resource efficiency, product lifecycle management, and waste minimization. One of the company's key initiatives is the "Zero Waste to Landfill" program, which aims to eliminate the disposal of waste in landfills by reusing, recycling, or repurposing materials in the production process. This initiative is complemented by SCG's commitment to circular design, where products are designed with the end of their lifecycle in mind, ensuring that they can be easily recycled or repurposed (SCG, 2023).

In addition to SCG, other leading corporations such as Thai Beverage and CP Group have also embraced circular economy principles. Thai Beverage has integrated circularity into its operations by focusing on water stewardship, waste management, and sustainable sourcing for its products. The company aims to reduce water usage in its production processes and recycle water to ensure a more sustainable water footprint. CP Group, one of Thailand's largest conglomerates, has made strides in circular agriculture, focusing on reducing waste in food production and optimizing resource use in its supply chain. CP's initiatives, which include sustainable sourcing of agricultural products and minimizing food waste, are essential components of the broader circular economy framework (Suntikul et al., 2022).

These corporate efforts not only contribute to reducing environmental impact but also highlight the growing recognition of the business opportunities associated with circularity. By implementing circular business models, companies in Thailand are increasingly able to enhance their competitiveness, improve efficiency, and meet consumer demand for sustainable products. As such, these corporations are playing a crucial role in advancing Thailand's transition towards a circular economy, setting a strong example for other companies in the region to follow.

Challenges and Opportunities

While the transition to a circular economy presents numerous benefits, it is not without its challenges. In Thailand, both corporations and policymakers face several barriers that hinder the full implementation of circular economy practices. These challenges include a lack of infrastructure for waste management and recycling, limited awareness and understanding of circular economy principles, and financial constraints.

One of the primary challenges is the inadequate waste management infrastructure. Although Thailand has made progress in waste collection and disposal, the country still lacks an efficient and widespread system for recycling and reusing materials. This limitation presents a significant barrier for companies attempting to adopt circular practices that require a robust recycling infrastructure to close the loop on materials. For example, many companies face difficulties in sourcing recycled materials of sufficient quality or in establishing closed-loop systems for their products due to these infrastructure gaps (Rattanawiwat et al., 2020).

Additionally, there is a need for greater awareness and education regarding circular economy principles among businesses, government officials, and the general public. Many corporations still rely on traditional linear models of production and consumption, which are deeply ingrained in existing business practices. This lack of understanding can hinder the widespread adoption of circular practices, as businesses may not see the financial or environmental value of shifting to a circular model (Suntikul et al., 2022). Moreover, smaller businesses often lack the resources to invest in the necessary technological innovations and processes required for circularity.

Despite these challenges, there are significant opportunities for both Thailand and its corporations to capitalize on the circular economy. With growing global demand for sustainable products and practices, Thailand can leverage its position as a regional leader to

attract international investment and partnerships in circular initiatives. Moreover, the increasing pressure from consumers for companies to adopt sustainable practices presents an opportunity for businesses to enhance their reputation and brand loyalty. By aligning with the principles of circularity, Thai companies can gain a competitive edge in the international market, especially in sectors such as manufacturing, construction, and agriculture (Geissdoerfer et al., 2017).

Furthermore, the Thai government has begun to take proactive steps to support the transition to a circular economy. Policies such as the "Thailand 4.0" initiative aim to modernize the country's industries and promote sustainable practices, including circular economy principles. With continued policy support and investment in research and development, Thailand could overcome the current barriers to circularity and position itself as a leader in sustainable economic practices in Southeast Asia.

Prospects

Thailand is well-positioned to emerge as a regional leader in the circular economy, driven by both the country's growing corporate commitment to sustainability and the support of governmental policies that are aligned with circular economy principles. Despite the challenges outlined earlier, such as inadequate infrastructure and limited awareness, the momentum generated by leading corporations, such as SCG, Thai Beverage, and CP Group, demonstrates that significant progress is already being made. These businesses are not only reducing their environmental footprints but also reaping the economic benefits associated with circular practices, such as increased resource efficiency, reduced waste disposal costs, and enhanced brand reputation.

Moreover, the Thai government has demonstrated its commitment to sustainability through initiatives like Thailand 4.0, which emphasizes innovation and green technologies, creating an environment conducive to circular economy growth. The government's proactive stance, coupled with international pressure on sustainability standards, presents a unique opportunity for Thailand to capitalize on the global shift towards more sustainable practices.

The key to Thailand's success in leading Southeast Asia's circular economy will be in scaling up the efforts of these corporations and addressing the barriers that currently exist. Investments in recycling infrastructure, public awareness campaigns, and technological innovation will be crucial in overcoming the challenges that hinder a more widespread adoption of circular economy practices. Additionally, fostering collaboration between the public and private sectors will be essential to creating the systemic changes needed for a transition to a circular economy at a national scale.

The circular economy represents not only an environmental imperative but also a significant economic opportunity for Thailand. By embracing circularity, Thai corporations can tap into new markets, enhance their global competitiveness, and contribute to the country's long-term sustainability goals. Given the current trajectory, Thailand's leadership in the circular economy is not only a possibility but a likely outcome in the coming years, solidifying its position as a frontrunner in Southeast Asia.

Conclusion

The circular economy represents a transformative shift in how businesses, governments, and societies approach resource use and environmental impact. In Thailand, this shift is already underway, fueled by the efforts of major corporations and supported by evolving governmental policies. Companies like SCG, Thai Beverage, and CP Group are leading the charge in adopting circular economy principles, setting a strong example for others in the region. These corporate initiatives demonstrate that circularity not only benefits the environment but also offers significant economic advantages, such as increased resource efficiency, cost savings, and enhanced brand reputation.

Despite the challenges posed by infrastructure gaps, limited awareness, and financial constraints, Thailand is well-positioned to overcome these obstacles. The government's commitment to sustainability through initiatives like Thailand 4.0, coupled with growing consumer demand for sustainable products, creates a favorable environment for the circular economy to thrive. By continuing to invest in recycling infrastructure, promoting education on circular economy principles, and fostering public-private collaborations, Thailand can solidify its position as a leader in circular economy practices within Southeast Asia.

In conclusion, Thailand's path toward a circular economy is not just a possibility but a clear opportunity. With the right support, investment, and innovation, the country can play a pivotal role in shaping the future of circularity in the region. As corporations and governments continue to collaborate and invest in sustainable practices, Thailand's leadership in circular economy could become a model for other Southeast Asian nations, contributing to a more sustainable and prosperous future for all.

References

- Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. (2017). The Circular Economy: A new sustainability paradigm?. *Journal of Cleaner Production*. 143, 757–768.
- Rattanawiwat, J., Boonchoo, P., & Buranasiri, A. (2020). *Circular economy in Thailand: A review of national strategies and industrial efforts*. Sustainable Development. 653–667. [In Thai]
- SCG. (2023). *Circular economy at SCG: Leading the way in sustainable business*. Retrieved from <https://www.scg.com/en/sustainability/circular-economy/>
- Suntikul, W., Jermstittiparsert, K., & Munch, P. (2022). *Exploring circular economy practices in Thailand's manufacturing sector: Challenges and opportunities*. Business Strategy and the Environment. 2765–2778. [In Thai].